



SEQUENCE LISTING

<110> Bertin, John
Wang, Weiye
Blatcher, Maria

<120> NOVEL MOLECULES OF THE PYRIN/NBS/LRR
PROTEIN FAMILY AND USES THEREOF

<130> 07334-334001

<140> 10/066,521

<141> 2001-01-31

<150> 60/318,645

<151> 2001-09-10

<150> 60/265,231

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<160> 25

<170> FastSEQ for Windows Version 4.0

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<211> 1506

<212> DNA

<213> Homo sapiens

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<221> CDS

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gag ctc aga aag gaa gag ttt tgg aaa ttt aag gag ctc ctc aaa caa 96
Glu Leu Arg Lys Glu Glu Phe Trp Lys Phe Lys Glu Leu Leu Lys Gln
20 25 30

cct ttg gag aaa ttt gaa ctc aag cca atc ccc tgg gct gag ctg aag 144
Pro Leu Glu Lys Phe Glu Leu Lys Pro Ile Pro Trp Ala Glu Leu Lys
35 40 45

aag gcc tcc aaa gaa gat gta gca aag ctg ctg gac aaa cat tac cca 192
Lys Ala Ser Lys Glu Asp Val Ala Lys Leu Leu Asp Lys His Tyr Pro
50 55 60

gga aag cag gca tgg gag gta aca ctg aac ctg ttt cta cag atc aat 240
Gly Lys Gln Ala Trp Glu Val Thr Leu Asn Leu Phe Leu Gln Ile Asn
65 70 75 80

agg aaa gat ctc tgg aca aag gct cag gaa gag atg aga aat aag cta 288

Arg	Lys	Asp	Leu	Trp	Thr	Lys	Ala	Gln	Glu	Glu	Met	Arg	Asn	Lys	Leu		
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aac	cca	tac	aga	aag	cat	atg	aag	gaa	aca	ttt	caa	ctc	ata	tgg	gag	336	
Asn	Pro	Tyr	Arg	Lys	His	Met	Lys	Glu	Thr	Phe	Gln	Leu	Ile	Trp	Glu		
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aag	gaa	acc	tgt	ctt	cac	gtc	cct	gag	cat	ttc	tac	aaa	gaa	acc	atg	384	
Lys	Glu	Thr	Cys	Leu	His	Val	Pro	Glu	His	Phe	Tyr	Lys	Glu	Thr	Met		
			115				120					125					
aaa	aat	gag	tat	aaa	gaa	ttg	aat	gac	gca	tat	act	gct	gcg	gct	aga	432	
Lys	Asn	Glu	Tyr	Lys	Glu	Leu	Asn	Asp	Ala	Tyr	Thr	Ala	Ala	Ala	Arg		
	130					135					140						
cga	cac	act	gtg	gtc	ctg	gaa	ggg	cct	gat	gga	att	gga	aaa	aca	acc	480	
Arg	His	Thr	Val	Val	Leu	Glu	Gly	Pro	Asp	Gly	Ile	Gly	Lys	Thr	Thr		
	145				150					155					160		
ctt	tta	aga	aaa	gtg	atg	ttg	gac	tgg	gca	gag	gga	aac	tta	tgg	aag	528	
Leu	Leu	Arg	Lys	Val	Met	Leu	Asp	Trp	Ala	Glu	Gly	Asn	Leu	Trp	Lys		
			165					170						175			
gac	agt	tac	aat	gag	aag	ctc	gtc	tac	tgg	cgg	gag	ctt	tgc	tca	atg	576	
Asp	Ser	Tyr	Asn	Glu	Lys	Leu	Val	Tyr	Trp	Arg	Glu	Leu	Cys	Ser	Met		
			180					185					190				
ttc	att	acc	aac	aag	aac	ttc	cag	att	tta	gac	atg	gaa	aat	acc	agc	624	
Phe	Ile	Thr	Asn	Lys	Asn	Phe	Gln	Ile	Leu	Asp	Met	Glu	Asn	Thr	Ser		
	195					200					205						
ctc	gat	gat	ccc	tcc	ctg	gcg	att	ctt	tgc	aaa	gcg	ctg	gct	cag	cct	672	
Leu	Asp	Asp	Pro	Ser	Leu	Ala	Ile	Leu	Cys	Lys	Ala	Leu	Ala	Gln	Pro		
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gtt	tgt	aaa	ctc	cga	aaa	ctc	ata	ttt	act	tct	gtg	tac	ttt	gga	cat	720	
Val	Cys	Lys	Leu	Arg	Lys	Leu	Ile	Phe	Thr	Ser	Val	Tyr	Phe	Gly	His		
	225				230				235					240			
gat	tca	gaa	tta	ttt	aag	gca	gtt	ctt	cac	aac	cct	cat	ctg	aaa	ctt	768	
Asp	Ser	Glu	Leu	Phe	Lys	Ala	Val	Leu	His	Asn	Pro	His	Leu	Lys	Leu		
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ctg	agc	ctg	tac	ggc	act	agc	ctc	tcc	cag	tct	gac	atc	aga	cac	ctg	816	
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			260					265					270				
tgt	gag	acg	ctg	aaa	cat	cca	atg	tgc	aag	ata	gaa	gag	ctg	ata	ctg	864	
Cys	Glu	Thr	Leu	Lys	His	Pro	Met	Cys	Lys	Ile	Glu	Glu	Leu	Ile	Leu		
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gga	aag	tgt	gac	atc	tcc	agt	gaa	gtt	tgt	gaa	gac	atc	gcc	tcc	gtc	912	
Gly	Lys	Cys	Asp	Ile	Ser	Ser	Glu	Val	Cys	Glu	Asp	Ile	Ala	Ser	Val		
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Leu	Ala	Cys	Asn	Ser	Lys	Leu	Lys	His	Leu	Ser	Leu	Val	Glu	Asn	Pro		

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ttg agg gac gaa gga atg acg ttg ctg tgt gaa gcc ctg aag cac tca				1008
Leu Arg Asp Glu Gly Met Thr Leu Leu Cys Glu Ala Leu Lys His Ser				
	325	330	335	
cac tgt gcc ctg gag agg ctg atg ttg atg ggc tgt ttc ctt act tcc				1056
His Cys Ala Leu Glu Arg Leu Met Leu Met Gly Cys Phe Leu Thr Ser				
	340	345	350	
gat tcc tgt aag gac att gct gct gtt ctt att tgc aat ggg aaa ctg				1104
Asp Ser Cys Lys Asp Ile Ala Ala Val Leu Ile Cys Asn Gly Lys Leu				
	355	360	365	
aag acc ctg aaa ctt ggg cat aat gaa ata gga gac act ggt gtc aga				1152
Lys Thr Leu Lys Leu Gly His Asn Glu Ile Gly Asp Thr Gly Val Arg				
	370	375	380	
cag tta tgt gca gct ttg cag cat cct cac tgt aaa tta gag tgt ctc				1200
Gln Leu Cys Ala Ala Leu Gln His Pro His Cys Lys Leu Glu Cys Leu				
	385	390	395	400
ggg ctg caa acg tgt ccg atc acc cgt gcc tgc tgc gac gac atc gcc				1248
Gly Leu Gln Thr Cys Pro Ile Thr Arg Ala Cys Cys Asp Asp Ile Ala				
	405	410	415	
gca gca ctc atc gcc tgc aaa aca ctg agg agc ctg aac ctc gac tgg				1296
Ala Ala Leu Ile Ala Cys Lys Thr Leu Arg Ser Leu Asn Leu Asp Trp				
	420	425	430	
att gcc ttg gat gct gat gca gtg gtg gtg ctg tgt gag gca ttg agc				1344
Ile Ala Leu Asp Ala Asp Ala Val Val Val Leu Cys Glu Ala Leu Ser				
	435	440	445	
cac ccg gac tgt gcc ctg cag atg ctg ggg ctg cac aaa tct ggc ttt				1392
His Pro Asp Cys Ala Leu Gln Met Leu Gly Leu His Lys Ser Gly Phe				
	450	455	460	
gat gaa gaa act cag aag atc ctg atg tct gtg gaa gaa aaa att ccc				1440
Asp Glu Glu Thr Gln Lys Ile Leu Met Ser Val Glu Glu Lys Ile Pro				
	465	470	475	480
cat ctg acc att tca cat gga cct tgg att gac gag gaa tac aag atc				1488
His Leu Thr Ile Ser His Gly Pro Trp Ile Asp Glu Glu Tyr Lys Ile				
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Arg Gly Val Leu Leu				
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<211> 501

<212> PRT

<213> Homo sapiens

<400> 2

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Pro	Leu	Glu	Lys 35	Phe	Glu	Leu	Lys 40	Pro	Ile	Pro	Trp	Ala 45	Glu	Leu	Lys
Lys	Ala	Ser	Lys 50	Glu	Asp	Val 55	Ala	Lys	Leu	Leu	Asp 60	Lys	His	Tyr	Pro
Gly 65	Lys	Gln	Ala	Trp 70	Glu	Val	Thr	Leu	Asn 75	Leu	Phe	Leu	Gln	Ile	Asn 80
Arg	Lys	Asp	Leu 85	Trp	Thr	Lys	Ala	Gln	Glu 90	Glu	Met	Arg	Asn 95	Lys	Leu
Asn	Pro	Tyr	Arg 100	Lys	His	Met	Lys	Glu 105	Thr	Phe	Gln	Leu 110	Ile	Trp	Glu
Lys	Glu	Thr	Cys 115	Leu	His	Val 120	Pro	Glu	His	Phe	Tyr	Lys 125	Glu	Thr	Met
Lys	Asn 130	Glu	Tyr	Lys	Glu	Leu 135	Asn	Asp	Ala	Tyr	Thr 140	Ala	Ala	Ala	Arg
Arg 145	His	Thr	Val	Val	Leu 150	Glu	Gly	Pro	Asp	Gly 155	Ile	Gly	Lys	Thr	Thr 160
Leu	Leu	Arg	Lys 165	Val	Met	Leu	Asp	Trp 170	Ala	Glu	Gly	Asn 175	Leu	Trp	Lys
Asp	Ser	Tyr	Asn 180	Glu	Lys	Leu	Val	Tyr 185	Trp	Arg	Glu	Leu 190	Cys	Ser	Met
Phe	Ile	Thr 195	Asn	Lys	Asn	Phe	Gln 200	Ile	Leu	Asp	Met 205	Glu	Asn	Thr	Ser
Leu	Asp 210	Asp	Pro	Ser	Leu	Ala 215	Ile	Leu	Cys	Lys 220	Ala	Leu	Ala	Gln	Pro
Val 225	Cys	Lys	Leu	Arg	Lys 230	Leu	Ile	Phe	Thr	Ser 235	Val	Tyr	Phe	Gly	His 240
Asp	Ser	Glu	Leu 245	Phe	Lys	Ala	Val	Leu	His 250	Asn	Pro	His	Leu	Lys	Leu
Leu	Ser	Leu	Tyr 260	Gly	Thr	Ser	Leu	Ser 265	Gln	Ser	Asp 270	Ile	Arg	His	Leu
Cys	Glu	Thr 275	Leu	Lys	His	Pro	Met 280	Cys	Lys	Ile	Glu 285	Glu	Leu	Ile	Leu
Gly	Lys 290	Cys	Asp	Ile	Ser	Ser 295	Glu	Val	Cys	Glu	Asp 300	Ile	Ala	Ser	Val
Leu 305	Ala	Cys	Asn	Ser	Lys 310	Leu	Lys	His	Leu	Ser 315	Leu	Val	Glu	Asn	Pro 320
Leu	Arg	Asp	Glu 325	Gly	Met	Thr	Leu	Leu 330	Cys	Glu	Ala	Leu	Lys 335	His	Ser
His	Cys	Ala 340	Leu	Glu	Arg	Leu	Met 345	Leu	Met	Gly	Cys 350	Phe	Leu	Thr	Ser
Asp	Ser	Cys 355	Lys	Asp	Ile	Ala	Ala 360	Val	Leu	Ile	Cys 365	Asn	Gly	Lys	Leu
Lys	Thr 370	Leu	Lys	Leu	Gly 375	His	Asn	Glu	Ile	Gly 380	Asp	Thr	Gly	Val	Arg
Gln 385	Leu	Cys	Ala	Ala	Leu 390	Gln	His	Pro	His 395	Cys	Lys	Leu	Glu	Cys	Leu
Gly	Leu	Gln	Thr 405	Cys	Pro	Ile	Thr	Arg	Ala 410	Cys	Cys	Asp	Asp	Ile	Ala
Ala	Ala	Leu	Ile 420	Ala	Cys	Lys	Thr 425	Leu	Arg	Ser	Leu	Asn 430	Leu	Asp	Trp
Ile	Ala 435	Leu	Asp	Ala	Asp	Ala 440	Val	Val	Val	Leu	Cys 445	Glu	Ala	Leu	Ser
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Asp Glu Glu Thr Gln Lys Ile Leu Met Ser Val Glu Glu Lys Ile Pro
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Arg Gly Val Leu Leu
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<222> (1)...(330)

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gag ctc aaa aag gag gag ttc agg aaa ttt aaa gaa cat ctc aag caa      96
Glu Leu Lys Lys Glu Glu Phe Arg Lys Phe Lys Glu His Leu Lys Gln
      20              25              30

atg act ttg cag ctt gaa ctc aag cag att ccc tgg act gag gtc aaa      144
Met Thr Leu Gln Leu Glu Leu Lys Gln Ile Pro Trp Thr Glu Val Lys
      35              40              45

aaa gca tcc cgg gaa gaa ctt gca aac ctc ttg atc aag cac tat gaa      192
Lys Ala Ser Arg Glu Glu Leu Ala Asn Leu Leu Ile Lys His Tyr Glu
      50              55              60

gaa caa caa gct tgg aac ata acc tta aga atc ttt caa aag atg gat      240
Glu Gln Gln Ala Trp Asn Ile Thr Leu Arg Ile Phe Gln Lys Met Asp
      65              70              75              80

aga aag gat ctc tgc atg aag gtc atg agg gag aga aca ggt gag gga      288
Arg Lys Asp Leu Cys Met Lys Val Met Arg Glu Arg Thr Gly Glu Gly
      85              90              95

gtc tgg gaa ggg gga agc ctt ctt ata atg agg act atg tcc      330
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taa      333

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<210> 4
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Lys	Ala	Ser	Arg	Glu	Glu	Leu	Ala	Asn	Leu	Leu	Ile	Lys	His	Tyr	Glu	
	50					55					60					
Glu	Gln	Gln	Ala	Trp	Asn	Ile	Thr	Leu	Arg	Ile	Phe	Gln	Lys	Met	Asp	
65					70				75					80		
Arg	Lys	Asp	Leu	Cys	Met	Lys	Val	Met	Arg	Glu	Arg	Thr	Gly	Glu	Gly	
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tgt	ctc	tat	gag	cta	gac	aag	gaa	gaa	ttt	cag	aca	ttc	aag	gaa	tta	96
Cys	Leu	Tyr	Glu	Leu	Asp	Lys	Glu	Glu	Phe	Gln	Thr	Phe	Lys	Glu	Leu	
			20					25					30			

cta	aag	aag	aaa	tct	tca	gaa	tcg	acc	aca	tgc	tct	att	cca	cag	ttt	144
Leu	Lys	Lys	Lys	Ser	Ser	Glu	Ser	Thr	Thr	Cys	Ser	Ile	Pro	Gln	Phe	
		35					40					45				

gaa	atc	gag	aat	gcc	aac	gtg	gaa	tgt	ctg	gca	ctc	ctc	ttg	cat	gag	192
Glu	Ile	Glu	Asn	Ala	Asn	Val	Glu	Cys	Leu	Ala	Leu	Leu	Leu	His	Glu	
	50					55				60						

tat	tat	gga	gca	tcg	ctg	gcc	tgg	gct	acg	tcc	att	agc	atc	ttt	gaa	240
Tyr	Tyr	Gly	Ala	Ser	Leu	Ala	Trp	Ala	Thr	Ser	Ile	Ser	Ile	Phe	Glu	
65					70				75					80		

aac	atg	aac	ctg	cga	acc	ctc	tcg	gag	aag	gca	cgg	gat	gac	atg	aaa	288
Asn	Met	Asn	Leu	Arg	Thr	Leu	Ser	Glu	Lys	Ala	Arg	Asp	Asp	Met	Lys	
			85					90						95		

aaa	att	tca	caa	gct	atg	gaa	caa	gaa	ggg	gcc	aca	gca	gca	gag	aca	336
Lys	Ile	Ser	Gln	Ala	Met	Glu	Gln	Glu	Gly	Ala	Thr	Ala	Ala	Glu	Thr	
			100					105					110			

gaa	gaa	caa	gaa	att	tca	caa	gct	atg	gaa	caa	gaa	ggg	gcc	aca	gca	384
Glu	Glu	Gln	Glu	Ile	Ser	Gln	Ala	Met	Glu	Gln	Glu	Gly	Ala	Thr	Ala	
		115					120					125				

gca	gag	aca	gaa	gaa	caa	gga	cat	gga	ggg	gac	aca	tgg	gac	tac	aag	432
Ala	Glu	Thr	Glu	Glu	Gln	Gly	His	Gly	Gly	Asp	Thr	Trp	Asp	Tyr	Lys	
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Ser His Val Met Thr Lys Phe Ala Glu Glu Glu Asp Val Arg Arg Ser	
145 150 155 160	
ttt gaa aac act gct gct gac tgg ccg gaa atg caa acg ttg gct ggt	528
Phe Glu Asn Thr Ala Ala Asp Trp Pro Glu Met Gln Thr Leu Ala Gly	
165 170 175	
gct ttt gat tca gac cgg tgg ggc ttc ccg cct cgc acg gtg gtt ctg	576
Ala Phe Asp Ser Asp Arg Trp Gly Phe Arg Pro Arg Thr Val Val Leu	
180 185 190	
cac gga aag tca gga att ggg aaa tcg gct cta gcc aga agg atc gtg	624
His Gly Lys Ser Gly Ile Gly Lys Ser Ala Leu Ala Arg Arg Ile Val	
195 200 205	
ctg tgc tgg gcg caa ggt gga ctc tac cag gga atg ttc tcc tac gtc	672
Leu Cys Trp Ala Gln Gly Gly Leu Tyr Gln Gly Met Phe Ser Tyr Val	
210 215 220	
ttc ttc ctc ccc gtt aga gag atg cag ccg aag aag gag agc agt gtc	720
Phe Phe Leu Pro Val Arg Glu Met Gln Arg Lys Lys Glu Ser Ser Val	
225 230 235 240	
aca gag ttc atc tcc agg gag tgg cca gac tcc cag gct ccg gtg acg	768
Thr Glu Phe Ile Ser Arg Glu Trp Pro Asp Ser Gln Ala Pro Val Thr	
245 250 255	
gag atc atg tcc cga cca gaa agg ctg ttg ttc atc att gac ggt ttc	816
Glu Ile Met Ser Arg Pro Glu Arg Leu Leu Phe Ile Ile Asp Gly Phe	
260 265 270	
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Asp Asp Leu Gly Ser Val Leu Asn Asn Asp Thr Lys Leu Cys Lys Asp	
275 280 285	
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Trp Ala Glu Lys Gln Pro Pro Phe Thr Leu Ile Arg Ser Leu Leu Arg	
290 295 300	
aag gtc ctg ctc cct gag tcc ttc ctg atc gtc acc gtc aga gac gtg	960
Lys Val Leu Leu Pro Glu Ser Phe Leu Ile Val Thr Val Arg Asp Val	
305 310 315 320	
ggc aca gag aag ctc aag tca gag gtc gtg tct ccc cgt tac ctg tta	1008
Gly Thr Glu Lys Leu Lys Ser Glu Val Val Ser Pro Arg Tyr Leu Leu	
325 330 335	
gtt aga gga atc tcc ggg gaa caa aga atc cac ttg ctc ctt gag cgc	1056
Val Arg Gly Ile Ser Gly Glu Gln Arg Ile His Leu Leu Leu Glu Arg	
340 345 350	
ggg att ggt gag cat cag aag aca caa ggg ttg cgt gcg atc atg aac	1104
Gly Ile Gly Glu His Gln Lys Thr Gln Gly Leu Arg Ala Ile Met Asn	
355 360 365	

aac cgt gag ctg ctc gac cag tgc cag gtg ccc gcc gtg ggc tct ctc Asn Arg Glu Leu Leu Asp Gln Cys Gln Val Pro Ala Val Gly Ser Leu 370 375 380	1152
atc tgc gtg gcc ctg cag ctg cag gac gtg gtg ggg gag agc gtc gcc Ile Cys Val Ala Leu Gln Leu Gln Asp Val Val Gly Glu Ser Val Ala 385 390 395 400	1200
ccc ttc aac caa acg ctc aca ggc ctg cac gcc gct ttt gtg ttt cat Pro Phe Asn Gln Thr Leu Thr Gly Leu His Ala Ala Phe Val Phe His 405 410 415	1248
cag ctc acc cct cga ggc gtg gtc cgg cgc tgt ctc aat ctg gag gaa Gln Leu Thr Pro Arg Gly Val Val Arg Arg Cys Leu Asn Leu Glu Glu 420 425 430	1296
aga gtt gtc ctg aag cgc ttc tgc cgt atg gct gtg gag gga gtg tgg Arg Val Val Leu Lys Arg Phe Cys Arg Met Ala Val Glu Gly Val Trp 435 440 445	1344
aat agg aag tca gtg ttt gat ggt gac gac ctc atg gtt caa gga ctc Asn Arg Lys Ser Val Phe Asp Gly Asp Asp Leu Met Val Gln Gly Leu 450 455 460	1392
ggg gag tct gag ctc cgt gct ctg ttt cac atg aac atc ctt ctc cca Gly Glu Ser Glu Leu Arg Ala Leu Phe His Met Asn Ile Leu Leu Pro 465 470 475 480	1440
gac agc cac tgt gag gag tac tac acc ttc ttc cac ctc agt ctc cag Asp Ser His Cys Glu Glu Tyr Tyr Thr Phe Phe His Leu Ser Leu Gln 485 490 495	1488
gac ttc tgt gcc gcc ttg tac tac gtg tta gag ggc ctg gaa atc gag Asp Phe Cys Ala Ala Leu Tyr Tyr Val Leu Glu Gly Leu Glu Ile Glu 500 505 510	1536
cca gct ctc tgc cct ctg tac gtt gag aag aca aag agg tcc atg gag Pro Ala Leu Cys Pro Leu Tyr Val Glu Lys Thr Lys Arg Ser Met Glu 515 520 525	1584
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gtc tct ctg ttg ggt cag cag cct aat gcc acc acc cca gga gac acc Val Ser Leu Leu Gly Gln Gln Pro Asn Ala Thr Thr Pro Gly Asp Thr 580 585 590	1776
ctg gac gcc ttc cac tgt ctt ttc gag act caa gac aaa gag ttt gtt	1824

Leu	Asp	Ala	Phe	His	Cys	Leu	Phe	Glu	Thr	Gln	Asp	Lys	Glu	Phe	Val		
		595					600					605					
cgc	ttg	gca	tta	aac	agc	ttc	caa	gaa	gtg	tgg	ctt	ccg	att	aac	cag	1872	
Arg	Leu	Ala	Leu	Asn	Ser	Phe	Gln	Glu	Val	Trp	Leu	Pro	Ile	Asn	Gln		
	610					615					620						
aac	ctg	gac	ttg	ata	gca	tct	tcc	ttc	tgc	ctc	cag	cac	tgt	ccg	tat	1920	
Asn	Leu	Asp	Leu	Ile	Ala	Ser	Ser	Phe	Cys	Leu	Gln	His	Cys	Pro	Tyr		
	625				630					635					640		
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Leu	Arg	Lys	Ile	Arg	Val	Asp	Val	Lys	Gly	Ile	Phe	Pro	Arg	Asp	Glu		
				645					650					655			
tcc	gct	gag	gca	tgt	cct	gtg	gtc	cct	cta	tgg	atg	cgg	gat	aag	acc	2016	
Ser	Ala	Glu	Ala	Cys	Pro	Val	Val	Pro	Leu	Trp	Met	Arg	Asp	Lys	Thr		
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ctc	att	gag	gag	cag	tgg	gaa	gat	ttc	tgc	tcc	atg	ctt	ggc	acc	cac	2064	
Leu	Ile	Glu	Glu	Gln	Trp	Glu	Asp	Phe	Cys	Ser	Met	Leu	Gly	Thr	His		
		675				680						685					
cca	cac	ctg	cgg	cag	ctg	gac	ctg	ggc	agc	agc	atc	ctg	aca	gag	cgg	2112	
Pro	His	Leu	Arg	Gln	Leu	Asp	Leu	Gly	Ser	Ser	Ile	Leu	Thr	Glu	Arg		
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gcc	atg	aag	acc	ctg	tgt	gcc	aag	ctg	agg	cat	ccc	acc	tgc	aag	ata	2160	
Ala	Met	Lys	Thr	Leu	Cys	Ala	Lys	Leu	Arg	His	Pro	Thr	Cys	Lys	Ile		
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cag	acc	ctg	atg	ttt	aga	aat	gca	cag	att	acc	cct	ggt	gtg	cag	cac	2208	
Gln	Thr	Leu	Met	Phe	Arg	Asn	Ala	Gln	Ile	Thr	Pro	Gly	Val	Gln	His		
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ctc	tgg	aga	atc	gtc	atg	gcc	aac	cgt	aac	cta	aga	tcc	ctc	aac	ttg	2256	
Leu	Trp	Arg	Ile	Val	Met	Ala	Asn	Arg	Asn	Leu	Arg	Ser	Leu	Asn	Leu		
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gga	ggc	acc	cac	ctg	aag	gaa	gag	gat	gta	agg	atg	gcg	tgt	gaa	gcc	2304	
Gly	Gly	Thr	His	Leu	Lys	Glu	Glu	Asp	Val	Arg	Met	Ala	Cys	Glu	Ala		
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tta	aaa	cac	cca	aaa	tgt	ttg	ttg	gag	tct	ttg	agg	ctg	gat	tgc	tgt	2352	
Leu	Lys	His	Pro	Lys	Cys	Leu	Leu	Glu	Ser	Leu	Arg	Leu	Asp	Cys	Cys		
	770					775					780						
gga	ttg	acc	cat	gcc	tgt	tac	ctg	aag	atc	tcc	caa	atc	ctt	acg	acc	2400	
Gly	Leu	Thr	His	Ala	Cys	Tyr	Leu	Lys	Ile	Ser	Gln	Ile	Leu	Thr	Thr		
	785				790					795					800		
tcc	ccc	agc	ctg	aaa	tct	ctg	agc	ctg	gca	gga	aac	aag	gtg	aca	gac	2448	
Ser	Pro	Ser	Leu	Lys	Ser	Leu	Ser	Leu	Ala	Gly	Asn	Lys	Val	Thr	Asp		
				805					810					815			
cag	gga	gta	atg	cct	ctc	agt	gat	gcc	ttg	aga	gtc	tcc	cag	tgc	gcc	2496	
Gln	Gly	Val	Met	Pro	Leu	Ser	Asp	Ala	Leu	Arg	Val	Ser	Gln	Cys	Ala		

820	825	830	
ctg cag aag ctg ata ctg gag gac tgt ggc atc aca gcc acg ggt tgc Leu Gln Lys Leu Ile Leu Glu Asp Cys Gly Ile Thr Ala Thr Gly Cys 835 840 845			2544
cag agt ctg gcc tca gcc ctc gtc agc aac cgg agc ttg aca cac ctg Gln Ser Leu Ala Ser Ala Leu Val Ser Asn Arg Ser Leu Thr His Leu 850 855 860			2592
tgc cta tcc aac aac agc ctg ggg aac gaa ggt gta aat cta ctg tgt Cys Leu Ser Asn Asn Ser Leu Gly Asn Glu Gly Val Asn Leu Leu Cys 865 870 875 880			2640
cga tcc atg agg ctt ccc cac tgt agt ctg cag agg ctg atg ctg aat Arg Ser Met Arg Leu Pro His Cys Ser Leu Gln Arg Leu Met Leu Asn 885 890 895			2688
cag tgc cac ctg gac acg gct ggc tgt ggt ttt ctt gca ctt gcg ctt Gln Cys His Leu Asp Thr Ala Gly Cys Gly Phe Leu Ala Leu Ala Leu 900 905 910			2736
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gaa gac aat ggc gtg aag ctt ctg tgc gag gtc atg aga gaa cca tct Glu Asp Asn Gly Val Lys Leu Cys Glu Val Met Arg Glu Pro Ser 930 935 940			2832
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ctg tgc gag gga ctg aag caa aag aac agt gtt ctg acg aga ctc ggg Leu Cys Glu Gly Leu Lys Gln Lys Asn Ser Val Leu Thr Arg Leu Gly 995 1000 1005			3024
ttg aag gca tgt gga ctg act tct gat tgc tgt gag gca ctc tcc ttg Leu Lys Ala Cys Gly Leu Thr Ser Asp Cys Cys Glu Ala Leu Ser Leu 1010 1015 1020			3072
gcc ctt tcc tgc aac cgg cat ctg acc agt cta aac ctg gtg cag aat Ala Leu Ser Cys Asn Arg His Leu Thr Ser Leu Asn Leu Val Gln Asn 1025 1030 1035 1040			3120
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ccc acg tct aac tta cag ata att ggg ctg tgg aaa tgg cag tac cct Pro Thr Ser Asn Leu Gln Ile Ile Gly Leu Trp Lys Trp Gln Tyr Pro 1060 1065 1070	3216
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ctg gcc acg gca aat ggt gag tcc cag aga gtt gac aac gtg gag cag Leu Ala Thr Ala Asn Gly Glu Ser Gln Arg Val Asp Asn Val Glu Gln 1155 1160 1165	3504
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ggg ctt gga tcc aac agt gct gat cat gac cac gga ggt atg gcc tgg Gly Leu Gly Ser Asn Ser Ala Asp His Asp His Gly Gly Met Ala Trp 1205 1210 1215	3648
tca cta ggg aga gag ctg agc tcg agg ggc ttg tgt cca aca gtg ctg Ser Leu Gly Arg Glu Leu Ser Ser Arg Gly Leu Cys Pro Thr Val Leu 1220 1225 1230	3696
atg acc aca gcg gtg tgt cct ggt cac tgg gag cgg ctg ggc tct agg Met Thr Thr Ala Val Cys Pro Gly His Trp Glu Arg Leu Gly Ser Arg 1235 1240 1245	3744
ggc tgg tgt ctt aac agt gct gat gac cac agc ggt gtg tcc tgg tca Gly Trp Cys Leu Asn Ser Ala Asp Asp His Ser Gly Val Ser Trp Ser 1250 1255 1260	3792
ctg gga gcg gct ggg ctc gag ggg ctt gtg tcc aac agt gct gat gac Leu Gly Ala Ala Gly Leu Glu Gly Leu Val Ser Asn Ser Ala Asp Asp 1265 1270 1275 1280	3840

cac agc ggt gtg gcc tgg tca ctg gga gcg gct ggg ctc gag ggg ctt 3888
 His Ser Gly Val Ala Trp Ser Leu Gly Ala Ala Gly Leu Glu Gly Leu
 1285 1290 1295

gtg tcc aac agt gct gat gac cac agc ggt gtg tcc tgg tca ctg gga 3936
 Val Ser Asn Ser Ala Asp Asp His Ser Gly Val Ser Trp Ser Leu Gly
 1300 1305 1310

gcg gct ggg ctc gag ggg ctt gtg tcc aac agt gct gat gac cac agc 3984
 Ala Ala Gly Leu Glu Gly Leu Val Ser Asn Ser Ala Asp Asp His Ser
 1315 1320 1325

ggt gtg tcc tgg tca ctg gga gcg gct ggg ctc gag ggg ctg gtg tct 4032
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taa 4035

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 <213> Homo sapiens

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 Leu Lys Lys Lys Ser Ser Glu Ser Thr Thr Cys Ser Ile Pro Gln Phe
 35 40 45
 Glu Ile Glu Asn Ala Asn Val Glu Cys Leu Ala Leu Leu Leu His Glu
 50 55 60
 Tyr Tyr Gly Ala Ser Leu Ala Trp Ala Thr Ser Ile Ser Ile Phe Glu
 65 70 75 80
 Asn Met Asn Leu Arg Thr Leu Ser Glu Lys Ala Arg Asp Asp Met Lys
 85 90 95
 Lys Ile Ser Gln Ala Met Glu Gln Glu Gly Ala Thr Ala Ala Glu Thr
 100 105 110
 Glu Glu Gln Glu Ile Ser Gln Ala Met Glu Gln Glu Gly Ala Thr Ala
 115 120 125
 Ala Glu Thr Glu Glu Gln Gly His Gly Gly Asp Thr Trp Asp Tyr Lys
 130 135 140
 Ser His Val Met Thr Lys Phe Ala Glu Glu Glu Asp Val Arg Arg Ser
 145 150 155 160
 Phe Glu Asn Thr Ala Ala Asp Trp Pro Glu Met Gln Thr Leu Ala Gly
 165 170 175
 Ala Phe Asp Ser Asp Arg Trp Gly Phe Arg Pro Arg Thr Val Val Leu
 180 185 190
 His Gly Lys Ser Gly Ile Gly Lys Ser Ala Leu Ala Arg Arg Ile Val
 195 200 205
 Leu Cys Trp Ala Gln Gly Gly Leu Tyr Gln Gly Met Phe Ser Tyr Val
 210 215 220
 Phe Phe Leu Pro Val Arg Glu Met Gln Arg Lys Lys Glu Ser Ser Val
 225 230 235 240
 Thr Glu Phe Ile Ser Arg Glu Trp Pro Asp Ser Gln Ala Pro Val Thr
 245 250 255
 Glu Ile Met Ser Arg Pro Glu Arg Leu Leu Phe Ile Ile Asp Gly Phe

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Asp	Asp	Leu	Gly	Ser	Val	Leu	Asn	Asn	Asp	Thr	Lys	Leu	Cys	Lys	Asp
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Trp	Ala	Glu	Lys	Gln	Pro	Pro	Phe	Thr	Leu	Ile	Arg	Ser	Leu	Leu	Arg
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Lys	Val	Leu	Leu	Pro	Glu	Ser	Phe	Leu	Ile	Val	Thr	Val	Arg	Asp	Val
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Gly	Thr	Glu	Lys	Leu	Lys	Ser	Glu	Val	Val	Ser	Pro	Arg	Tyr	Leu	Leu
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Val	Arg	Gly	Ile	Ser	Gly	Glu	Gln	Arg	Ile	His	Leu	Leu	Leu	Glu	Arg
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Pro	Phe	Asn	Gln	Thr	Leu	Thr	Gly	Leu	His	Ala	Ala	Phe	Val	Phe	His
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Gln	Leu	Thr	Pro	Arg	Gly	Val	Val	Arg	Arg	Cys	Leu	Asn	Leu	Glu	Glu
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465					470					475					480
Asp	Ser	His	Cys	Glu	Tyr	Tyr	Thr	Phe	His	Phe	His	Leu	Ser	Leu	Gln
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Asp	Phe	Cys	Ala	Ala	Leu	Tyr	Tyr	Val	Leu	Glu	Gly	Leu	Glu	Ile	Glu
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Pro	Ala	Leu	Cys	Pro	Leu	Tyr	Val	Glu	Lys	Thr	Lys	Arg	Ser	Met	Glu
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Leu	Gly	Cys	Pro	Val	Pro	Leu	Gly	Val	Lys	Gln	Lys	Leu	Leu	His	Trp
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Val	Ser	Leu	Leu	Gly	Gln	Gln	Pro	Asn	Ala	Thr	Thr	Pro	Gly	Asp	Thr
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Gly	Leu	Thr	His	Ala	Cys	Tyr	Leu	Lys	Ile	Ser	Gln	Ile	Leu	Thr	Thr
785				790					795						800
Ser	Pro	Ser	Leu	Lys	Ser	Leu	Ser	Leu	Ala	Gly	Asn	Lys	Val	Thr	Asp
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Gln	Gly	Val	Met	Pro	Leu	Ser	Asp	Ala	Leu	Arg	Val	Ser	Gln	Cys	Ala
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Leu	Gln	Lys	Leu	Ile	Leu	Glu	Asp	Cys	Gly	Ile	Thr	Ala	Thr	Gly	Cys
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Gln	Ser	Leu	Ala	Ser	Ala	Leu	Val	Ser	Asn	Arg	Ser	Leu	Thr	His	Leu
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Cys	Leu	Ser	Asn	Asn	Ser	Leu	Gly	Asn	Glu	Gly	Val	Asn	Leu	Leu	Cys
865				870					875						880
Arg	Ser	Met	Arg	Leu	Pro	His	Cys	Ser	Leu	Gln	Arg	Leu	Met	Leu	Asn
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Cys	Cys	Glu	Ser	Leu	Ser	Cys	Val	Ile	Ser	Arg	Ser	Arg	His	Leu	Lys
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Ser	Leu	Asp	Leu	Thr	Asp	Asn	Ala	Leu	Gly	Asp	Gly	Gly	Val	Ala	Ala
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Leu	Cys	Glu	Gly	Leu	Lys	Gln	Lys	Asn	Ser	Val	Leu	Thr	Arg	Leu	Gly
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Leu	Lys	Ala	Cys	Gly	Leu	Thr	Ser	Asp	Cys	Cys	Glu	Ala	Leu	Ser	Leu
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Asn	Phe	Ser	Pro	Lys	Gly	Met	Met	Lys	Leu	Cys	Ser	Ala	Phe	Ala	Cys
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Pro	Thr	Ser	Asn	Leu	Gln	Ile	Ile	Gly	Leu	Trp	Lys	Trp	Gln	Tyr	Pro
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Ser	Leu	Gly	Arg	Glu	Leu	Ser	Ser	Arg	Gly	Leu	Cys	Pro	Thr	Val	Leu	
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His	Ser	Gly	Val	Ala	Trp	Ser	Leu	Gly	Ala	Ala	Gly	Leu	Glu	Gly	Leu	
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Val	Ser	Asn	Ser	Ala	Asp	Asp	His	Ser	Gly	Val	Ser	Trp	Ser	Leu	Gly	
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Ala	Ala	Gly	Leu	Glu	Gly	Leu	Val	Ser	Asn	Ser	Ala	Asp	Asp	His	Ser	
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Gln	Leu	Ser	Gln	Asp	Glu	Leu	Ser	Lys	Phe	Lys	Ser	Leu	Ile	Arg	Thr	
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atc	tcc	ctg	gga	aag	gag	cta	cag	acc	gtc	ccc	cag	aca	gag	gta	gac	144
Ile	Ser	Leu	Gly	Lys	Glu	Leu	Gln	Thr	Val	Pro	Gln	Thr	Glu	Val	Asp	
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Lys	Ala	Asn	Gly	Lys	Gln	Leu	Val	Glu	Ile	Phe	Thr	Ser	His	Ser	Cys	
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Ser	Tyr	Trp	Ala	Gly	Met	Ala	Ala	Ile	Gln	Val	Phe	Glu	Lys	Met	Asn	
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cga	acg	cat	ctg	tct	ggg	aga	gct	gat	gaa	cac	tgt	gtg	atg	ccc	cca	288
Arg	Thr	His	Leu	Ser	Gly	Arg	Ala	Asp	Glu	His	Cys	Val	Met	Pro	Pro	
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cct	taa															294

Pro

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 Ile Ser Leu Gly Lys Glu Leu Gln Thr Val Pro Gln Thr Glu Val Asp
 35 40 45
 Lys Ala Asn Gly Lys Gln Leu Val Glu Ile Phe Thr Ser His Ser Cys
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 Pro

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 gagttctcgc tgcctcacct ccagctcccc aagtctgaac tgtggtcact ggtcttctgg 240
 tctggacttg atccttcccc cagatcacc atg gcc atg gcc aag gcc aga aag 293
 Met Ala Met Ala Lys Ala Arg Lys
 1 5
 ccc cgg gag gca ttg ctc tgg gcc ttg agt gac ctt gag gag aac gat 341
 Pro Arg Glu Ala Leu Leu Trp Ala Leu Ser Asp Leu Glu Glu Asn Asp
 10 15 20
 ttc aag aag tta aag ttc tac tta cgg gat atg acc ctg tct gag ggg 389
 Phe Lys Lys Leu Lys Phe Tyr Leu Arg Asp Met Thr Leu Ser Glu Gly
 25 30 35 40
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 Pro Ala Pro Thr Gly Gln Arg Gly Ser Leu Glu Gly
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 35 40 45
 Ser Leu Glu Gly
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 Leu Ser Asp Leu Glu Glu Asn Asp Phe Lys Lys Leu Lys Phe Tyr Leu
 20 25 30
 cgg gat atg acc ctg tct gag ggc cag ccc cca ctg gcc aga ggg gag 144
 Arg Asp Met Thr Leu Ser Glu Gly Gln Pro Pro Leu Ala Arg Gly Glu
 35 40 45
 ttg gag ggc ctg att ccg gtg gac ctg gca gaa tta ctg att tca aag 192
 Leu Glu Gly Leu Ile Pro Val Asp Leu Ala Glu Leu Leu Ile Ser Lys
 50 55 60
 tat gga gaa aag gag gct gtg aaa gtt gtc ctc aag ggc ttg aag gtc 240
 Tyr Gly Glu Lys Glu Ala Val Lys Val Val Leu Lys Gly Leu Lys Val
 65 70 75 80
 atg aac ctg ttg gaa ctt gtg gac cag ctc agc cat att tgt ctg cat 288
 Met Asn Leu Leu Glu Leu Val Asp Gln Leu Ser His Ile Cys Leu His
 85 90 95

gat tac aga gaa gta tac cga gag cat gtg cgc tgc cta gag gaa tgg	336
Asp Tyr Arg Glu Val Tyr Arg Glu His Val Arg Cys Leu Glu Glu Trp	
100 105 110	
cag gaa gca gga gtc aat ggc aga tac aac cag gtg ctc ctg gtg gcc	384
Gln Glu Ala Gly Val Asn Gly Arg Tyr Asn Gln Val Leu Leu Val Ala	
115 120 125	
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Lys Pro Ser Ser Glu Ser Pro Glu Ser Leu Ala Cys Pro Phe Pro Glu	
130 135 140	
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Gln Glu Leu Glu Ser Val Thr Val Glu Ala Leu Phe Asp Ser Gly Glu	
145 150 155 160	
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Lys Pro Ser Leu Ala Pro Ser Leu Val Val Leu Gln Gly Ser Ala Gly	
165 170 175	
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Thr Gly Lys Thr Thr Leu Ala Arg Lys Met Val Leu Asp Trp Ala Thr	
180 185 190	
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Gly Thr Leu Tyr Pro Gly Arg Phe Asp Tyr Val Phe Tyr Val Ser Cys	
195 200 205	
aaa gaa gtg gtc ctg ctg ctg gag agc aaa ctg gag cag ctc ctt ttc	672
Lys Glu Val Val Leu Leu Leu Glu Ser Lys Leu Glu Gln Leu Leu Phe	
210 215 220	
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Trp Cys Cys Gly Asp Asn Gln Ala Pro Val Thr Glu Ile Leu Arg Gln	
225 230 235 240	
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Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Phe Asp Glu Leu Gln Arg	
245 250 255	
ccc ttt gaa gaa aag ttg aag aag agg ggt ttg agt ccc aag gag agc	816
Pro Phe Glu Glu Lys Leu Lys Lys Arg Gly Leu Ser Pro Lys Glu Ser	
260 265 270	
ctg ctg cac ctt cta att agg aga cat aca ctc ccc acg tgc tcc ctt	864
Leu Leu His Leu Leu Ile Arg Arg His Thr Leu Pro Thr Cys Ser Leu	
275 280 285	
ctc atc acc acc cgg ccc ctg gct ttg agg aat ctg gag ccc ttg ctg	912
Leu Ile Thr Thr Arg Pro Leu Ala Leu Arg Asn Leu Glu Pro Leu Leu	
290 295 300	
aaa caa gca cgt cat gtc cat atc cta ggc ttc tct gag gag gag agg	960
Lys Gln Ala Arg His Val His Ile Leu Gly Phe Ser Glu Glu Glu Arg	
305 310 315 320	

gcg agg tac ttc agc tcc tat ttc acg gat gag aag caa gct gac cgt	1008
Ala Arg Tyr Phe Ser Ser Tyr Phe Thr Asp Glu Lys Gln Ala Asp Arg	
325 330 335	
gcc ttc gac att gta cag aaa aat gac att ctc tac aaa gcg tgt cag	1056
Ala Phe Asp Ile Val Gln Lys Asn Asp Ile Leu Tyr Lys Ala Cys Gln	
340 345 350	
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Val Pro Gly Ile Cys Trp Val Val Cys Ser Trp Leu Gln Gly Gln Met	
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Glu Arg Gly Lys Val Val Leu Glu Thr Pro Arg Asn Ser Thr Asp Ile	
370 375 380	
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Phe Met Ala Tyr Val Ser Thr Phe Leu Pro Pro Asp Asp Asp Gly Gly	
385 390 395 400	
tgc tcc gag ctt tcc cgg cac agg gtc ctg agg agt ctg tgc tcc cta	1248
Cys Ser Glu Leu Ser Arg His Arg Val Leu Arg Ser Leu Cys Ser Leu	
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Ala Ala Glu Gly Ile Gln His Gln Arg Phe Leu Phe Glu Glu Ala Glu	
420 425 430	
ctc agg aaa cat aat tta gat ggc ccc agg ctt gcc gct ttc ctg agt	1344
Leu Arg Lys His Asn Leu Asp Gly Pro Arg Leu Ala Ala Phe Leu Ser	
435 440 445	
agt aac gac tac caa ttg gga ctt gcc atc aag aag ttc tac agc ttc	1392
Ser Asn Asp Tyr Gln Leu Gly Leu Ala Ile Lys Lys Phe Tyr Ser Phe	
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cgc cac atc agc ttc cag gac ttt ttt cat gcc atg tct tac ctg gtg	1440
Arg His Ile Ser Phe Gln Asp Phe Phe His Ala Met Ser Tyr Leu Val	
465 470 475 480	
aaa gag gac caa agc cgg ctg ggg aag gag tcc cgc aga gaa gtg caa	1488
Lys Glu Asp Gln Ser Arg Leu Gly Lys Glu Ser Arg Arg Glu Val Gln	
485 490 495	
agg ctg ctg gag gta aag gag cag gaa ggg aat gat gag atg acc ctc	1536
Arg Leu Leu Glu Val Lys Glu Gln Glu Gly Asn Asp Glu Met Thr Leu	
500 505 510	
act atg cag ttt tta ctg gac atc tcg aaa aaa gac agc ttc tcg aac	1584
Thr Met Gln Phe Leu Leu Asp Ile Ser Lys Lys Asp Ser Phe Ser Asn	
515 520 525	
ttg gag ctc aag ttc tgc ttc aga att tct ccc tgt tta gcg cag gat	1632
Leu Glu Leu Lys Phe Cys Phe Arg Ile Ser Pro Cys Leu Ala Gln Asp	
530 535 540	
ctg aag cat ttt aaa gaa cag atg gaa tct atg aag cac aac agg acc	1680

Leu	Lys	His	Phe	Lys	Glu	Gln	Met	Glu	Ser	Met	Lys	His	Asn	Arg	Thr	
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tg	g	at	g	tt	cc	ct	gt	g	gc	aaa	ata	aag	aat	ct	gt	1728
Trp	Asp	Leu	Glu	Phe	Ser	Leu	Tyr	Glu	Ala	Lys	Ile	Lys	Asn	Leu	Val	
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aaa	ggt	att	cag	atg	aac	aat	gta	tca	ttc	aag	ata	aaa	cat	tca	aat	1776
Lys	Gly	Ile	Gln	Met	Asn	Asn	Val	Ser	Phe	Lys	Ile	Lys	His	Ser	Asn	
			580					585					590			
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Glu	Lys	Lys	Ser	Gln	Ser	Gln	Asn	Leu	Phe	Ser	Val	Lys	Ser	Ser	Leu	
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Ser	His	Gly	Pro	Lys	Glu	Glu	Gln	Lys	Cys	Pro	Ser	Val	His	Gly	Gln	
	610					615					620					
aag	gag	ggc	aaa	gat	aat	ata	gca	gga	aca	caa	aag	gaa	gct	tct	act	1920
Lys	Glu	Gly	Lys	Asp	Asn	Ile	Ala	Gly	Thr	Gln	Lys	Glu	Ala	Ser	Thr	
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gga	aaa	ggc	aga	ggg	aca	gag	gaa	aca	cca	aaa	aat	act	tac	ata		1965
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Asp	Tyr	Arg	Glu	Val	Tyr	Arg	Glu	His	Val	Arg	Cys	Leu	Glu	Glu	Trp	
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Gln	Glu	Ala	Gly	Val	Asn	Gly	Arg	Tyr	Asn	Gln	Val	Leu	Leu	Val	Ala	
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Pro	Glu	Arg	Leu	Leu	Phe	Ile	Leu	Asp	Gly	Phe	Asp	Glu	Leu	Gln	Arg	
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Pro	Phe	Glu	Glu	Lys	Leu	Lys	Lys	Arg	Gly	Leu	Ser	Pro	Lys	Glu	Ser	
			260					265					270			
Leu	Leu	His	Leu	Leu	Ile	Arg	Arg	His	Thr	Leu	Pro	Thr	Cys	Ser	Leu	
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Leu	Ile	Thr	Thr	Arg	Pro	Leu	Ala	Leu	Arg	Asn	Leu	Glu	Pro	Leu	Leu	
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Lys	Gln	Ala	Arg	His	Val	His	Ile	Leu	Gly	Phe	Ser	Glu	Glu	Glu	Arg	
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Ala	Arg	Tyr	Phe	Ser	Ser	Tyr	Phe	Thr	Asp	Glu	Lys	Gln	Ala	Asp	Arg	
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Ala	Phe	Asp	Ile	Val	Gln	Lys	Asn	Asp	Ile	Leu	Tyr	Lys	Ala	Cys	Gln	
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Trp	Asp	Leu	Glu	Phe	Ser	Leu	Tyr	Glu	Ala	Lys	Ile	Lys	Asn	Leu	Val	
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Lys	Gly	Ile	Gln	Met	Asn	Asn	Val	Ser	Phe	Lys	Ile	Lys	His	Ser	Asn	
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Ser	His	Gly	Pro	Lys	Glu	Glu	Gln	Lys	Cys	Pro	Ser	Val	His	Gly	Gln	
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gag gct gtg gaa ctg aag aag ttc aag tta tac ctg ggg acc gcg aca 212
Glu Ala Val Glu Leu Lys Lys Phe Lys Leu Tyr Leu Gly Thr Ala Thr
25 30 35

gag ctg gga gaa ggc aag atc ccc tgg gga agc atg gag ata gcc ggt 260
Glu Leu Gly Glu Gly Lys Ile Pro Trp Gly Ser Met Glu Ile Ala Gly
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ttg gaa gaa ctc gag gct gtg gaa ctg aag aag ttc aag tta tac ctg      96
Leu Glu Glu Leu Glu Ala Val Glu Leu Lys Lys Phe Lys Leu Tyr Leu
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ggg acc gcg aca gag ctg gga gaa ggc aag atc ccc tgg gga agc atg      144
Gly Thr Ala Thr Glu Leu Gly Glu Gly Lys Ile Pro Trp Gly Ser Met
             35             40             45

gag aag gcc ggt ccc ctg gaa atg gcc cag ctg ctc atc acc cac ttc      192
Glu Lys Ala Gly Pro Leu Glu Met Ala Gln Leu Leu Ile Thr His Phe
             50             55             60

ggg cca gag gag gcc tgg agg ttg gct ctc agc acc ttt gag cgg ata      240
Gly Pro Glu Glu Ala Trp Arg Leu Ala Leu Ser Thr Phe Glu Arg Ile
             65             70             75             80

aac agg aag gac ctg tgg gag aga gga cag aga gag gac ctg gtg agg      288
Asn Arg Lys Asp Leu Trp Glu Arg Gly Gln Arg Glu Asp Leu Val Arg
             85             90             95

gat acc cca cct ggt ggc ccg tcc tca ctt ggg aac cag tca aca tgc      336
Asp Thr Pro Pro Gly Gly Pro Ser Ser Leu Gly Asn Gln Ser Thr Cys
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ctt ctg gaa gtc tct ctt gtc act cca aga aaa gat ccc cag gaa acc      384
Leu Leu Glu Val Ser Leu Val Thr Pro Arg Lys Asp Pro Gln Glu Thr
             115            120            125

tac agg gac tat gtc cgc agg aaa ttc cgg ctc atg gaa gac cgc aat      432
Tyr Arg Asp Tyr Val Arg Arg Lys Phe Arg Leu Met Glu Asp Arg Asn
             130            135            140

gcg cgc cta ggg gaa tgt gtc aac ctc agc cac cgg tac acc cgg ctc      480
Ala Arg Leu Gly Glu Cys Val Asn Leu Ser His Arg Tyr Thr Arg Leu
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ctg ctg gtg aag gag cac tca aac ccc atg cag gtc cag cag cag ctt	528
Leu Leu Val Lys Glu His Ser Asn Pro Met Gln Val Gln Gln Gln Leu	
165 170 175	
ctg gac aca ggc cgg gga cac gcg agg acc gtg gga cac cag gct agc	576
Leu Asp Thr Gly Arg Gly His Ala Arg Thr Val Gly His Gln Ala Ser	
180 185 190	
ccc atc aag ata gag acc ctc ttt gag cca gac gag gag cgc ccc gag	624
Pro Ile Lys Ile Glu Thr Leu Phe Glu Pro Asp Glu Glu Arg Pro Glu	
195 200 205	
cca ccg cgc acc gtg gtc atg caa ggc gcg gca ggg ata ggc aag tcc	672
Pro Pro Arg Thr Val Val Met Gln Gly Ala Ala Gly Ile Gly Lys Ser	
210 215 220	
atg ctg gca cac aag gtg atg ctg gac tgg gcg gac ggg aag ctc ttc	720
Met Leu Ala His Lys Val Met Leu Asp Trp Ala Asp Gly Lys Leu Phe	
225 230 235 240	
caa ggc aga ttt gat tat ctc ttc tac atc aac tgc agg gag atg aac	768
Gln Gly Arg Phe Asp Tyr Leu Phe Tyr Ile Asn Cys Arg Glu Met Asn	
245 250 255	
cag agt gcc acg gaa tgc agc atg caa gac ctc atc ttc agc tgc tgg	816
Gln Ser Ala Thr Glu Cys Ser Met Gln Asp Leu Ile Phe Ser Cys Trp	
260 265 270	
cct gag ccc agc gcg cct ctc cag gag ctc atc cga gtt ccc gag cgc	864
Pro Glu Pro Ser Ala Pro Leu Gln Glu Leu Ile Arg Val Pro Glu Arg	
275 280 285	
ctc ctt ttc atc atc gac ggc ttc gat gag ctc aag cct tct ttc cac	912
Leu Leu Phe Ile Ile Asp Gly Phe Asp Glu Leu Lys Pro Ser Phe His	
290 295 300	
gat cct cag gga ccc tgg tgc ctc tgc tgg gag gag aaa cgg ccc acg	960
Asp Pro Gln Gly Pro Trp Cys Leu Cys Trp Glu Glu Lys Arg Pro Thr	
305 310 315 320	
gag ctg ctt ctt aac agc tta att cgg aag aag ctg ctc cct gag cta	1008
Glu Leu Leu Leu Asn Ser Leu Ile Arg Lys Lys Leu Leu Pro Glu Leu	
325 330 335	
tct ttg ctc atc acc aca cgg ccc acg gct ttg gag aag ctc cac cgt	1056
Ser Leu Leu Ile Thr Thr Arg Pro Thr Ala Leu Glu Lys Leu His Arg	
340 345 350	
ctg ctg gag cac ccc agg cat gtg gag atc ctg ggc ttc tct gag gca	1104
Leu Leu Glu His Pro Arg His Val Glu Ile Leu Gly Phe Ser Glu Ala	
355 360 365	
gaa agg aag gaa tac ttc tac aag tat ttc cac aat gca gag cag gcg	1152
Glu Arg Lys Glu Tyr Phe Tyr Lys Tyr Phe His Asn Ala Glu Gln Ala	
370 375 380	
ggc caa gtc ttc aat tac gtg agg gac aac gag cct ctc ttc acc atg	1200

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Cys	Phe	Val	Pro	Leu	Val	Cys	Trp	Val	Val	Cys	Thr	Cys	Leu	Gln	Gln	
				405					410					415		
cag	ctg	gag	ggt	ggg	ggg	ctg	ttg	aga	cag	acg	tcc	agg	acc	acc	act	1296
Gln	Leu	Glu	Gly	Gly	Gly	Leu	Leu	Arg	Gln	Thr	Ser	Arg	Thr	Thr	Thr	
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Ala	Val	Tyr	Met	Leu	Tyr	Leu	Leu	Ser	Leu	Met	Gln	Pro	Lys	Pro	Gly	
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Ala	Pro	Arg	Leu	Gln	Pro	Pro	Pro	Asn	Gln	Arg	Gly	Leu	Cys	Ser	Leu	
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gcg	gca	gat	ggg	ctc	tgg	aat	cag	aaa	atc	cta	ttt	gag	gag	cag	gac	1440
Ala	Ala	Asp	Gly	Leu	Trp	Asn	Gln	Lys	Ile	Leu	Phe	Glu	Glu	Gln	Asp	
465					470					475					480	
ctc	cgg	aag	cac	ggc	cta	gac	ggg	gaa	gac	gtc	tct	gcc	ttc	ctc	aac	1488
Leu	Arg	Lys	His	Gly	Leu	Asp	Gly	Glu	Asp	Val	Ser	Ala	Phe	Leu	Asn	
				485					490					495		
atg	aac	atc	ttc	cag	aag	gac	atc	aac	tgt	gag	agg	tac	tac	agc	ttc	1536
Met	Asn	Ile	Phe	Gln	Lys	Asp	Ile	Asn	Cys	Glu	Arg	Tyr	Tyr	Ser	Phe	
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atc	cac	ttg	agt	ttc	cag	gaa	ttc	ttt	gca	gct	atg	tac	tat	atc	ctg	1584
Ile	His	Leu	Ser	Phe	Gln	Glu	Phe	Phe	Ala	Ala	Met	Tyr	Tyr	Ile	Leu	
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gac	gag	ggg	gag	ggc	ggg	gca	ggc	cca	gac	cag	gac	gtg	acc	agg	ctg	1632
Asp	Glu	Gly	Glu	Gly	Gly	Ala	Gly	Pro	Asp	Gln	Asp	Val	Thr	Arg	Leu	
	530					535					540					
ttg	acc	gag	tac	gcg	ttt	tct	gaa	agg	agc	ttc	ctg	gca	ctc	acc	agc	1680
Leu	Thr	Glu	Tyr	Ala	Phe	Ser	Glu	Arg	Ser	Phe	Leu	Ala	Leu	Thr	Ser	
545					550					555					560	
cgc	ttc	ctg	ttt	gga	ctc	ctg	aac	gag	gag	acc	agg	agc	cac	ctg	gag	1728
Arg	Phe	Leu	Phe	Gly	Leu	Leu	Asn	Glu	Glu	Thr	Arg	Ser	His	Leu	Glu	
				565					570					575		
aag	agt	ctc	tgc	tgg	aag	gtc	tcg	ccg	cac	atc	aag	atg	gac	ctg	ttg	1776
Lys	Ser	Leu	Cys	Trp	Lys	Val	Ser	Pro	His	Ile	Lys	Met	Asp	Leu	Leu	
			580					585					590			
cag	tgg	atc	caa	agc	aaa	gct	cag	agc	gac	ggc	tcc	acc	ctg	cag	cag	1824
Gln	Trp	Ile	Gln	Ser	Lys	Ala	Gln	Ser	Asp	Gly	Ser	Thr	Leu	Gln	Gln	
		595					600					605				
ggc	tcc	ttg	gag	ttc	ttc	agc	tgc	ttg	tac	gag	atc	cag	gag	gag	gag	1872
Gly	Ser	Leu	Glu	Phe	Phe	Ser	Cys	Leu	Tyr	Glu	Ile	Gln	Glu	Glu	Glu	

610	615	620	
ttt atc cag cag gcc ctg agc cac ttc cag gtg atc gtg gtc agc aac			1920
Phe Ile Gln Gln Ala Leu Ser His Phe Gln Val Ile Val Val Ser Asn			
625	630	635	640
att gcc tcc aag atg gag cac atg gtc tcc tcg ttc tgt ctg aag cgc			1968
Ile Ala Ser Lys Met Glu His Met Val Ser Ser Phe Cys Leu Lys Arg			
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tgc agg agc gcc cag gtg ctg cac ttg tat ggc gcc acc tac agc gcg			2016
Cys Arg Ser Ala Gln Val Leu His Leu Tyr Gly Ala Thr Tyr Ser Ala			
	660	665	670
gac ggg gaa gac cgc gcg agg tgc tcc gca gga gcg cac acg ctg ttg			2064
Asp Gly Glu Asp Arg Ala Arg Cys Ser Ala Gly Ala His Thr Leu Leu			
	675	680	685
gtg cag cta cca gag agg acc gtt ctg ctg gac gcc tac agt gaa cat			2112
Val Gln Leu Pro Glu Arg Thr Val Leu Leu Asp Ala Tyr Ser Glu His			
	690	695	700
ctg gca gcg gcc ctg tgc acc aat cca aac ctg ata gag ctg tct ctg			2160
Leu Ala Ala Ala Leu Cys Thr Asn Pro Asn Leu Ile Glu Leu Ser Leu			
	705	710	715
tac cga aat gcc ctg ggc agc cgg ggg gtg aag ctg ctc tgt caa gga			2208
Tyr Arg Asn Ala Leu Gly Ser Arg Gly Val Lys Leu Leu Cys Gln Gly			
	725	730	735
ctc aga cac ccc aac tgc aaa ctt cag aac ctg agg ctg aag agg tgc			2256
Leu Arg His Pro Asn Cys Lys Leu Gln Asn Leu Arg Leu Lys Arg Cys			
	740	745	750
cgc atc tcc agc tca gcc tgc gag gac ctc tct gca gct ctc ata gcc			2304
Arg Ile Ser Ser Ser Ala Cys Glu Asp Leu Ser Ala Ala Leu Ile Ala			
	755	760	765
aat aag aat ttg aca agg atg gat ctc agt ggc aac ggc gtt gga ttc			2352
Asn Lys Asn Leu Thr Arg Met Asp Leu Ser Gly Asn Gly Val Gly Phe			
	770	775	780
cca ggc atg atg ctg ctt tgc gag ggc ctg cgg cat ccc caa tgc agg			2400
Pro Gly Met Met Leu Cys Glu Gly Leu Arg His Pro Gln Cys Arg			
	785	790	800
ctg cag atg att cag ttg agg aag tgt cag ctg gag tcc ggg gct tgt			2448
Leu Gln Met Ile Gln Leu Arg Lys Cys Gln Leu Glu Ser Gly Ala Cys			
	805	810	815
cag gag atg gct tct gtg ctt ggc acc aac cca cat ctg gtt gag ttg			2496
Gln Glu Met Ala Ser Val Leu Gly Thr Asn Pro His Leu Val Glu Leu			
	820	825	830
gac ctg aca gga aat gca ctg gag gat ttg ggc ctg agg tta cta tgc			2544
Asp Leu Thr Gly Asn Ala Leu Glu Asp Leu Gly Leu Arg Leu Leu Cys			
	835	840	845

cag gga ctg agg cac cca gtc tgc aga cta cgg act ttg tgg ctg aag Gln Gly Leu Arg His Pro Val Cys Arg Leu Arg Thr Leu Trp Leu Lys 850 855 860	2592
atc tgc cgc ctc act gct gct gcc tgt gac gag ctg gcc tca act ctc Ile Cys Arg Leu Thr Ala Ala Ala Cys Asp Glu Leu Ala Ser Thr Leu 865 870 875 880	2640
agt gtg aac cag agc ctg aga gag ctg gac ctg agc ctg aat gag ctg Ser Val Asn Gln Ser Leu Arg Glu Leu Asp Leu Ser Leu Asn Glu Leu 885 890 895	2688
ggg gac ctc ggg gtg ctg ctg ctg tgt gag ggc ctc agg cat ccc acg Gly Asp Leu Gly Val Leu Leu Leu Cys Glu Gly Leu Arg His Pro Thr 900 905 910	2736
tgc aag ctc cag acc ctg cgg ttg ggc atc tgc cgg ctg ggc tct gcc Cys Lys Leu Gln Thr Leu Arg Leu Gly Ile Cys Arg Leu Gly Ser Ala 915 920 925	2784
gcc tgt gag ggt ctt tct gtg gtg ctc cag gcc aac cac aac ctc cgg Ala Cys Glu Gly Leu Ser Val Val Leu Gln Ala Asn His Asn Leu Arg 930 935 940	2832
gag ctg gac ttg agt ttc aac gac ctg gga gac tgg ggc ctg tgg ttg Glu Leu Asp Leu Ser Phe Asn Asp Leu Gly Asp Trp Gly Leu Trp Leu 945 950 955 960	2880
ctg gct gag ggg ctg caa cat ccc gcc tgc aga ctc cag aaa ctg tgg Leu Ala Glu Gly Leu Gln His Pro Ala Cys Arg Leu Gln Lys Leu Trp 965 970 975	2928
ctg gat agc tgt ggc ctc aca gcc aag gct tgt gag aat ctt tac ttc Leu Asp Ser Cys Gly Leu Thr Ala Lys Ala Cys Glu Asn Leu Tyr Phe 980 985 990	2976
acc ctg ggg atc aac cag acc ttg acc gac ctt tac ctg acc aac aac Thr Leu Gly Ile Asn Gln Thr Leu Thr Asp Leu Tyr Leu Thr Asn Asn 995 1000 1005	3024
gcc cta ggg gac aca ggt gtc cga ctg ctt tgc aag cgg ctg agc cat Ala Leu Gly Asp Thr Gly Val Arg Leu Leu Cys Lys Arg Leu Ser His 1010 1015 1020	3072
cct ggc tgc aaa ctc cga gtc ctc tgg tta ttt ggg atg gac ctg aat Pro Gly Cys Lys Leu Arg Val Leu Trp Leu Phe Gly Met Asp Leu Asn 1025 1030 1035 1040	3120
aaa atg acc cac agt agg ttg gca gcg ctt cga gta aca aaa cct tat Lys Met Thr His Ser Arg Leu Ala Ala Leu Arg Val Thr Lys Pro Tyr 1045 1050 1055	3168
ttg gac att ggc tgc tga Leu Asp Ile Gly Cys 1060	3186

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 <212> PRT
 <213> Homo sapiens

<400> 18

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			20					25					30		
Gly	Thr	Ala	Thr	Glu	Leu	Gly	Glu	Gly	Lys	Ile	Pro	Trp	Gly	Ser	Met
		35					40					45			
Glu	Lys	Ala	Gly	Pro	Leu	Glu	Met	Ala	Gln	Leu	Leu	Ile	Thr	His	Phe
	50					55				60					
Gly	Pro	Glu	Glu	Ala	Trp	Arg	Leu	Ala	Leu	Ser	Thr	Phe	Glu	Arg	Ile
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Asn	Arg	Lys	Asp	Leu	Trp	Glu	Arg	Gly	Gln	Arg	Glu	Asp	Leu	Val	Arg
			85						90					95	
Asp	Thr	Pro	Pro	Gly	Gly	Pro	Ser	Ser	Leu	Gly	Asn	Gln	Ser	Thr	Cys
			100					105					110		
Leu	Leu	Glu	Val	Ser	Leu	Val	Thr	Pro	Arg	Lys	Asp	Pro	Gln	Glu	Thr
		115					120					125			
Tyr	Arg	Asp	Tyr	Val	Arg	Arg	Lys	Phe	Arg	Leu	Met	Glu	Asp	Arg	Asn
	130					135					140				
Ala	Arg	Leu	Gly	Glu	Cys	Val	Asn	Leu	Ser	His	Arg	Tyr	Thr	Arg	Leu
145					150					155					160
Leu	Leu	Val	Lys	Glu	His	Ser	Asn	Pro	Met	Gln	Val	Gln	Gln	Gln	Leu
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Leu	Asp	Thr	Gly	Arg	Gly	His	Ala	Arg	Thr	Val	Gly	His	Gln	Ala	Ser
			180					185					190		
Pro	Ile	Lys	Ile	Glu	Thr	Leu	Phe	Glu	Pro	Asp	Glu	Glu	Arg	Pro	Glu
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Pro	Pro	Arg	Thr	Val	Val	Met	Gln	Gly	Ala	Ala	Gly	Ile	Gly	Lys	Ser
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Met	Leu	Ala	His	Lys	Val	Met	Leu	Asp	Trp	Ala	Asp	Gly	Lys	Leu	Phe
225					230					235					240
Gln	Gly	Arg	Phe	Asp	Tyr	Leu	Phe	Tyr	Ile	Asn	Cys	Arg	Glu	Met	Asn
			245						250					255	
Gln	Ser	Ala	Thr	Glu	Cys	Ser	Met	Gln	Asp	Leu	Ile	Phe	Ser	Cys	Trp
		260						265					270		
Pro	Glu	Pro	Ser	Ala	Pro	Leu	Gln	Glu	Leu	Ile	Arg	Val	Pro	Glu	Arg
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Asp	Pro	Gln	Gly	Pro	Trp	Cys	Leu	Cys	Trp	Glu	Glu	Lys	Arg	Pro	Thr
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Glu	Leu	Leu	Leu	Asn	Ser	Leu	Ile	Arg	Lys	Lys	Leu	Leu	Pro	Glu	Leu
			325						330					335	
Ser	Leu	Leu	Ile	Thr	Thr	Arg	Pro	Thr	Ala	Leu	Glu	Lys	Leu	His	Arg
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Leu	Leu	Glu	His	Pro	Arg	His	Val	Glu	Ile	Leu	Gly	Phe	Ser	Glu	Ala
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Glu	Arg	Lys	Glu	Tyr	Phe	Tyr	Lys	Tyr	Phe	His	Asn	Ala	Glu	Gln	Ala
	370					375					380				
Gly	Gln	Val	Phe	Asn	Tyr	Val	Arg	Asp	Asn	Glu	Pro	Leu	Phe	Thr	Met
385					390					395					400

Cys	Phe	Val	Pro	Leu	Val	Cys	Trp	Val	Val	Cys	Thr	Cys	Leu	Gln	Gln		
				405					410					415			
Gln	Leu	Glu	Gly	Gly	Gly	Leu	Leu	Arg	Gln	Thr	Ser	Arg	Thr	Thr	Thr		
			420					425					430				
Ala	Val	Tyr	Met	Leu	Tyr	Leu	Leu	Ser	Leu	Met	Gln	Pro	Lys	Pro	Gly		
		435					440					445					
Ala	Pro	Arg	Leu	Gln	Pro	Pro	Pro	Asn	Gln	Arg	Gly	Leu	Cys	Ser	Leu		
	450					455					460						
Ala	Ala	Asp	Gly	Leu	Trp	Asn	Gln	Lys	Ile	Leu	Phe	Glu	Glu	Gln	Asp		
465					470					475					480		
Leu	Arg	Lys	His	Gly	Leu	Asp	Gly	Glu	Asp	Val	Ser	Ala	Phe	Leu	Asn		
			485						490					495			
Met	Asn	Ile	Phe	Gln	Lys	Asp	Ile	Asn	Cys	Glu	Arg	Tyr	Tyr	Ser	Phe		
		500						505					510				
Ile	His	Leu	Ser	Phe	Gln	Glu	Phe	Phe	Ala	Ala	Met	Tyr	Tyr	Ile	Leu		
	515						520					525					
Asp	Glu	Gly	Glu	Gly	Gly	Ala	Gly	Pro	Asp	Gln	Asp	Val	Thr	Arg	Leu		
	530					535					540						
Leu	Thr	Glu	Tyr	Ala	Phe	Ser	Glu	Arg	Ser	Phe	Leu	Ala	Leu	Thr	Ser		
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Arg	Phe	Leu	Phe	Gly	Leu	Leu	Asn	Glu	Glu	Thr	Arg	Ser	His	Leu	Glu		
			565						570					575			
Lys	Ser	Leu	Cys	Trp	Lys	Val	Ser	Pro	His	Ile	Lys	Met	Asp	Leu	Leu		
		580						585					590				
Gln	Trp	Ile	Gln	Ser	Lys	Ala	Gln	Ser	Asp	Gly	Ser	Thr	Leu	Gln	Gln		
	595						600					605					
Gly	Ser	Leu	Glu	Phe	Phe	Ser	Cys	Leu	Tyr	Glu	Ile	Gln	Glu	Glu	Glu		
	610					615					620						
Phe	Ile	Gln	Gln	Ala	Leu	Ser	His	Phe	Gln	Val	Ile	Val	Val	Ser	Asn		
625					630					635					640		
Ile	Ala	Ser	Lys	Met	Glu	His	Met	Val	Ser	Ser	Phe	Cys	Leu	Lys	Arg		
			645						650					655			
Cys	Arg	Ser	Ala	Gln	Val	Leu	His	Leu	Tyr	Gly	Ala	Thr	Tyr	Ser	Ala		
		660						665					670				
Asp	Gly	Glu	Asp	Arg	Ala	Arg	Cys	Ser	Ala	Gly	Ala	His	Thr	Leu	Leu		
	675					680						685					
Val	Gln	Leu	Pro	Glu	Arg	Thr	Val	Leu	Leu	Asp	Ala	Tyr	Ser	Glu	His		
	690					695					700						
Leu	Ala	Ala	Ala	Leu	Cys	Thr	Asn	Pro	Asn	Leu	Ile	Glu	Leu	Ser	Leu		
705					710					715					720		
Tyr	Arg	Asn	Ala	Leu	Gly	Ser	Arg	Gly	Val	Lys	Leu	Leu	Cys	Gln	Gly		
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Arg	Ile	Ser	Ser	Ala	Cys	Glu	Asp	Leu	Ser	Ala	Ala	Leu	Ile	Ala			
	755					760					765						
Asn	Lys	Asn	Leu	Thr	Arg	Met	Asp	Leu	Ser	Gly	Asn	Gly	Val	Gly	Phe		
	770					775					780						
Pro	Gly	Met	Met	Leu	Leu	Cys	Glu	Gly	Leu	Arg	His	Pro	Gln	Cys	Arg		
785					790					795					800		
Leu	Gln	Met	Ile	Gln	Leu	Arg	Lys	Cys	Gln	Leu	Glu	Ser	Gly	Ala	Cys		
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Gln	Glu	Met	Ala	Ser	Val	Leu	Gly	Thr	Asn	Pro	His	Leu	Val	Glu	Leu		
		820						825					830				
Asp	Leu	Thr	Gly	Asn	Ala	Leu	Glu	Asp	Leu	Gly	Leu	Arg	Leu	Leu	Cys		
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Gln	Gly	Leu	Arg	His	Pro	Val	Cys	Arg	Leu	Arg	Thr	Leu	Trp	Leu	Lys		

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      850              855              860
Ile Cys Arg Leu Thr Ala Ala Ala Cys Asp Glu Leu Ala Ser Thr Leu
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Ser Val Asn Gln Ser Leu Arg Glu Leu Asp Leu Ser Leu Asn Glu Leu
      885              890              895
Gly Asp Leu Gly Val Leu Leu Leu Cys Glu Gly Leu Arg His Pro Thr
      900              905              910
Cys Lys Leu Gln Thr Leu Arg Leu Gly Ile Cys Arg Leu Gly Ser Ala
      915              920              925
Ala Cys Glu Gly Leu Ser Val Val Leu Gln Ala Asn His Asn Leu Arg
      930              935              940
Glu Leu Asp Leu Ser Phe Asn Asp Leu Gly Asp Trp Gly Leu Trp Leu
945              950              955              960
Leu Ala Glu Gly Leu Gln His Pro Ala Cys Arg Leu Gln Lys Leu Trp
      965              970              975
Leu Asp Ser Cys Gly Leu Thr Ala Lys Ala Cys Glu Asn Leu Tyr Phe
      980              985              990
Thr Leu Gly Ile Asn Gln Thr Leu Thr Asp Leu Tyr Leu Thr Asn Asn
      995              1000              1005
Ala Leu Gly Asp Thr Gly Val Arg Leu Leu Cys Lys Arg Leu Ser His
      1010              1015              1020
Pro Gly Cys Lys Leu Arg Val Leu Trp Leu Phe Gly Met Asp Leu Asn
1025              1030              1035              1040
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Leu Asp Ile Gly Cys
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<213> Homo sapiens

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tcc tcc act cac agt tct cat att ctg ccc tgg aca ttc tct tgc tac      96
Ser Ser Thr His Ser Ser His Ile Leu Pro Trp Thr Phe Ser Cys Tyr
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ccc ggc tcc cca tgt gaa aat ggg gtc atg ctg tac atg aga aac gtg      144
Pro Gly Ser Pro Cys Glu Asn Gly Val Met Leu Tyr Met Arg Asn Val
      35              40              45

agc cat gag gag cta caa cgg ttc aag cag ctc tta ctg act gag ctc      192
Ser His Glu Glu Leu Gln Arg Phe Lys Gln Leu Leu Leu Thr Glu Leu
      50              55              60

agt act ggc acc atg ccc atc acc tgg gac cag gtc gag aca gcc agc      240
Ser Thr Gly Thr Met Pro Ile Thr Trp Asp Gln Val Glu Thr Ala Ser
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Trp Ala Glu Val Val His Leu Leu Ile Glu Arg Phe Pro Gly Arg Arg	
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gct tgg gat gtg act tcg aac atc ttt gcc att atg aac tgt gat aaa	336
Ala Trp Asp Val Thr Ser Asn Ile Phe Ala Ile Met Asn Cys Asp Lys	
100 105 110	
att ggg gtc ccg cag tta ttc tac tgt ctg cat gaa atc cgg gag gaa	384
Ile Gly Val Pro Gln Leu Phe Tyr Cys Leu His Glu Ile Arg Glu Glu	
115 120 125	
gcc ttt gta agc caa gcc tta aat gat tat cat aaa gtt gtc ttg aga	432
Ala Phe Val Ser Gln Ala Leu Asn Asp Tyr His Lys Val Val Leu Arg	
130 135 140	
att ggc aac aac aaa gaa gtt caa gtg tct gct ttt tgc ctg aag cgg	480
Ile Gly Asn Asn Lys Glu Val Gln Val Ser Ala Phe Cys Leu Lys Arg	
145 150 155 160	
tgt caa tat ttg cat gag gtg gaa ctg acc gtc acc ctg aac ttc atg	528
Cys Gln Tyr Leu His Glu Val Glu Leu Thr Val Thr Leu Asn Phe Met	
165 170 175	
aac gtg tgg aag ctc agc tcc agc tcc cat cct ggc tct gac cta agg	576
Asn Val Trp Lys Leu Ser Ser Ser Ser His Pro Gly Ser Asp Leu Arg	
180 185 190	
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Arg Val Asn Ser Thr Met Leu Asn Gln Asp Leu Ile Gly Val Leu Thr	
195 200 205	
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Gly Asn Gln His Leu Arg Tyr Leu Glu Ile Gln His Val Glu Val Glu	
210 215 220	
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Ser Lys Ala Val Lys Leu Leu Cys Arg Ala Leu Arg Ser Pro Arg Cys	
225 230 235 240	
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Arg Leu Gln Cys Leu Arg Leu Glu Asp Cys Leu Ala Thr Pro Arg Ile	
245 250 255	
tgg act gat ctt ggc aat aat ctt caa ggt aac ggg cat cta aag act	816
Trp Thr Asp Leu Gly Asn Asn Leu Gln Gly Asn Gly His Leu Lys Thr	
260 265 270	
ctc ata cta aga aaa aac tcc ctg gag aac tgt ggg gcg tat tac ctg	864
Leu Ile Leu Arg Lys Asn Ser Leu Glu Asn Cys Gly Ala Tyr Tyr Leu	
275 280 285	
tct gtg gcc cag ctg gag agg ctg tcg cag agt aag atg ctg acc cac	912
Ser Val Ala Gln Leu Glu Arg Leu Ser Gln Ser Lys Met Leu Thr His	
290 295 300	

ctg agc ttg gca gaa aac gcc ttg aaa gat gaa ggg gcc aag cat att 960
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 305 310 315 320

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 Trp Asn Ala Leu Pro His Leu Arg Cys Pro Leu Gln Arg Leu Val Leu
 325 330 335

 aga aag tgt gac ttg acc ttt aat tgc tgt cag gat atg atc tct gcg 1056
 Arg Lys Cys Asp Leu Thr Phe Asn Cys Cys Gln Asp Met Ile Ser Ala
 340 345 350

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 355 360 365

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 370 375 380

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 Asp Cys Thr Leu Gln Ile Leu Glu Leu Glu Asn Cys Leu Phe Thr Ser
 385 390 395 400

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 405 410 415

 aga cat ctg gac ttg agc aag aat gcg att gga gtc tat ggt att ctg 1296
 Arg His Leu Asp Leu Ser Lys Asn Ala Ile Gly Val Tyr Gly Ile Leu
 420 425 430

 acc ttg tgc gag gcc ttc tca agc caa aag aag aga gaa gag gtc att 1344
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 435 440 445

 ttc tgt att cct gcc tgg act cga ata act agc ttc tcc cca act cct 1392
 Phe Cys Ile Pro Ala Trp Thr Arg Ile Thr Ser Phe Ser Pro Thr Pro
 450 455 460

 cac cca ccc gac ttc acg gga aaa agt gac tgc cta tcc cag att aat 1440
 His Pro Pro Asp Phe Thr Gly Lys Ser Asp Cys Leu Ser Gln Ile Asn
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 cct tag 1446
 Pro

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Pro	Gly	Ser	Pro	Cys	Glu	Asn	Gly	Val	Met	Leu	Tyr	Met	Arg	Asn	Val
	35						40					45			
Ser	His	Glu	Glu	Leu	Gln	Arg	Phe	Lys	Gln	Leu	Leu	Leu	Thr	Glu	Leu
	50					55					60				
Ser	Thr	Gly	Thr	Met	Pro	Ile	Thr	Trp	Asp	Gln	Val	Glu	Thr	Ala	Ser
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Trp	Ala	Glu	Val	Val	His	Leu	Leu	Ile	Glu	Arg	Phe	Pro	Gly	Arg	Arg
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Ala	Trp	Asp	Val	Thr	Ser	Asn	Ile	Phe	Ala	Ile	Met	Asn	Cys	Asp	Lys
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Cys	Gln	Tyr	Leu	His	Glu	Val	Glu	Leu	Thr	Val	Thr	Leu	Asn	Phe	Met
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Leu	Ile	Leu	Arg	Lys	Asn	Ser	Leu	Glu	Asn	Cys	Gly	Ala	Tyr	Tyr	Leu
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Ser	Val	Ala	Gln	Leu	Glu	Arg	Leu	Ser	Gln	Ser	Lys	Met	Leu	Thr	His
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Trp	Asn	Ala	Leu	Pro	His	Leu	Arg	Cys	Pro	Leu	Gln	Arg	Leu	Val	Leu
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Ile	Cys	Cys	Gln	Ala	Met	Ala	Ser	Met	Leu	Arg	Lys	Asn	Gln	His	Leu
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Arg	His	Leu	Asp	Leu	Ser	Lys	Asn	Ala	Ile	Gly	Val	Tyr	Gly	Ile	Leu
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Thr	Leu	Cys	Glu	Ala	Phe	Ser	Ser	Gln	Lys	Lys	Arg	Glu	Glu	Val	Ile
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Phe	Cys	Ile	Pro	Ala	Trp	Thr	Arg	Ile	Thr	Ser	Phe	Ser	Pro	Thr	Pro
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Pro

470

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Leu	Tyr	Leu	Glu	Glu	Leu	Asn	Lys	Glu	Glu	Leu	Asn	Thr	Phe	Lys	Leu	
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ttc	cta	aag	gag	acc	atg	gaa	cct	gag	cat	ggc	ctg	aca	ccc	tg	act	144
Phe	Leu	Lys	Glu	Thr	Met	Glu	Pro	Glu	His	Gly	Leu	Thr	Pro	Trp	Thr	
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gaa	gtg	aag	aag	gcc	agg	cgg	gag	gac	ctg	gcc	aat	ttg	atg	aag	aaa	192
Glu	Val	Lys	Lys	Ala	Arg	Arg	Glu	Asp	Leu	Ala	Asn	Leu	Met	Lys	Lys	
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Tyr	Tyr	Pro	Gly	Glu	Lys	Ala	Trp	Ser	Val	Ser	Leu	Lys	Ile	Phe	Gly	
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Lys	Met	Asn	Leu	Lys	Asp	Leu	Cys	Glu	Arg	Ala	Lys	Glu	Glu	Ile	Asn	
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tg	tc	gcc	cag	act	ata	gga	cca	gat	gat	gcc	aag	gct	gga	gag	aca	336
Trp	Ser	Ala	Gln	Thr	Ile	Gly	Pro	Asp	Asp	Ala	Lys	Ala	Gly	Glu	Thr	
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caa	gaa	gat	cag	gag	gca	gtg	ctg	ggt	gat	gga	aca	gaa	tac	aga	aat	384
Gln	Glu	Asp	Gln	Glu	Ala	Val	Leu	Gly	Asp	Gly	Thr	Glu	Tyr	Arg	Asn	
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Leu	Leu	Glu	His	Leu	Phe	Asp	Val	Asp	Val	Lys	Thr	Gly	Ala	Gln	Pro	
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Ile Ile Gln Lys Asp Ala Glu Tyr Glu Asn Cys Tyr Val Phe Thr His	
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Leu Gln Cys Met Glu His Cys Arg Cys Leu Arg Thr Ile Arg Leu Ser	
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Val Thr Val Val Phe Glu Lys Lys Ile Leu Lys Thr Ser Leu Pro Thr	
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Asn Thr Trp Leu Lys Phe Ile Thr Phe Pro Asp Gly Cys Gln Asp Ile	
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Ser Thr Ser Leu Ile His Asn Lys Asn Leu Met His Leu Asp Leu Lys	
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Lys	Arg	Leu	Thr	His	Leu	Cys	Leu	Ala	Asp	Asn	Val	Leu	Gly	Asp	Gly	
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Gly	Val	Lys	Leu	Met	Ser	Asp	Ala	Leu	Gln	His	Ala	Gln	Cys	Thr	Leu	
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Lys	Ser	Leu	Val	Leu	Met	Gly	Cys	Val	Leu	Thr	Asn	Ala	Cys	Cys	Leu	
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gat	ctg	gct	tct	gtt	att	ttg	aat	aac	cca	aac	ctg	agg	agc	ctg	gac	2208
Asp	Leu	Ala	Ser	Val	Ile	Leu	Asn	Asn	Pro	Asn	Leu	Arg	Ser	Leu	Asp	
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Leu	Gly	Asn	Asn	Asp	Leu	Gln	Asp	Asp	Gly	Val	Lys	Ile	Leu	Cys	Asp	
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Ala	Leu	Arg	Tyr	Pro	Asn	Cys	Asn	Ile	Gln	Arg	Leu	Gly	Leu	Glu	Tyr	
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tgt	ggg	ttg	aca	tct	ctc	tgc	tgt	caa	gat	ctc	tcc	tct	gct	ctt	atc	2352
Cys	Gly	Leu	Thr	Ser	Leu	Cys	Cys	Gln	Asp	Leu	Ser	Ser	Ala	Leu	Ile	
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tgc	aac	aaa	aga	ctg	ata	aaa	atg	aat	ctg	aca	cag	aat	acc	tta	gga	2400
Cys	Asn	Lys	Arg	Leu	Ile	Lys	Met	Asn	Leu	Thr	Gln	Asn	Thr	Leu	Gly	
785					790				795					800		
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Tyr	Glu	Gly	Ile	Val	Lys	Leu	Tyr	Lys	Val	Leu	Lys	Ser	Pro	Lys	Cys	
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Lys	Leu	Gln	Val	Leu	Gly	Gln	Gln	Asp	Phe	Gln	Ala	Ala	Gln	Gly	Lys	
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ctc	caa	caa	agg	agg	cca	ttg	aag	ccg	tta	aga	ccg	ggg	cag	gtg	aac	2544
Leu	Gln	Gln	Arg	Arg	Pro	Leu	Lys	Pro	Leu	Arg	Pro	Gly	Gln	Val	Asn	
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Arg	Lys	Leu	Lys	Thr	Glu	Lys	Glu	Thr	Gln	Asn	Cys	Arg	Leu	Ser	Arg	

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Tyr Tyr Pro Gly Glu Lys Ala Trp Ser Val Ser Leu Lys Ile Phe Gly			
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Arg Ile Lys Glu Lys Phe Cys Ile Thr Trp Asp Lys Lys Ser Leu Ala			
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Gln Ile Val Val Leu Gln Gly Ala Ala Gly Val Gly Lys Thr Thr Leu			
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Val Arg Lys Ala Met Leu Asp Trp Ala Glu Gly Ser Leu Tyr Gln Gln			
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Lys Glu Arg Ser Phe Ala Gln Leu Ile Ser Lys Asp Trp Pro Ser Thr			
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Glu Gly Pro Ile Glu Glu Ile Met Tyr Gln Pro Ser Ser Leu Leu Phe			
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Ile Ile Asp Ser Phe Asp Glu Leu Asn Phe Ala Phe Glu Glu Pro Glu			
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Phe Ala Leu Cys Glu Asp Trp Thr Gln Glu His Pro Val Ser Phe Leu			
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Met Ser Ser Leu Leu Arg Lys Val Met Leu Pro Glu Ala Ser Leu Leu			
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Val Thr Thr Arg Leu Thr Thr Ser Lys Arg Leu Lys Gln Leu Leu Lys			

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Glu	Tyr	Ile	Tyr	Gln	Phe	Phe	Glu	Asp	Lys	Arg	Trp	Ala	Met	Lys	Val
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Pro	Leu	Val	Cys	Trp	Ala	Ala	Cys	Thr	Cys	Leu	Lys	Gln	Gln	Met	Glu
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 Arg Lys Leu Lys Thr Glu Lys Glu Thr Gln Asn Cys Arg Leu Ser Arg
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 Met Ala Ala Ser Phe Phe Ser Asp Phe Gly Leu Met Trp Tyr
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 Leu Glu Glu Leu Lys Lys Glu Glu Phe Arg Lys Phe Lys Glu His Leu
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 Lys Gln Met Thr Leu Gln Leu Glu Leu Lys Gln Ile Pro Trp Thr Glu
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 gtc aaa aaa gca tcc cgg gaa gaa ctt gca aac ctc ttg atc aag cac 255
 Val Lys Lys Ala Ser Arg Glu Glu Leu Ala Asn Leu Leu Ile Lys His
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 tat gaa gaa caa caa gct tgg aac ata acc tta aga atc ttt caa aag 303
 Tyr Glu Glu Gln Gln Ala Trp Asn Ile Thr Leu Arg Ile Phe Gln Lys
 65 70 75

 atg gat aga aag gat ctc tgc atg aag gtc atg agg gag aga aca gga 351
 Met Asp Arg Lys Asp Leu Cys Met Lys Val Met Arg Glu Arg Thr Gly
 80 85 90

 tac aca aag acc tat caa gct cac gca aag cag aaa ttc agc cgc tta 399
 Tyr Thr Lys Thr Tyr Gln Ala His Ala Lys Gln Lys Phe Ser Arg Leu
 95 100 105 110

 tgg tcc agc aag tct gtc act gag att cac cta tac ttt gag gag gaa 447

Trp	Ser	Ser	Lys	Ser	Val	Thr	Glu	Ile	His	Leu	Tyr	Phe	Glu	Glu	Glu		
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gtc	aag	caa	gaa	gaa	tgt	gac	cat	ttg	gac	cgc	ctt	ttt	gct	ccc	aag		495
Val	Lys	Gln	Glu	Glu	Cys	Asp	His	Leu	Asp	Arg	Leu	Phe	Ala	Pro	Lys		
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Glu	Thr	Gly	Lys	Gln	Pro	Arg	Thr	Val	Ile	Ile	Gln	Gly	Pro	Gln	Gly		
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Ile	Gly	Lys	Thr	Thr	Leu	Leu	Met	Lys	Leu	Met	Met	Ala	Trp	Ser	Asp		
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Asn	Lys	Ile	Phe	Arg	Asp	Arg	Phe	Leu	Tyr	Thr	Phe	Tyr	Phe	Cys	Cys		
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Arg	Glu	Leu	Arg	Glu	Leu	Pro	Pro	Thr	Ser	Leu	Ala	Asp	Leu	Ile	Ser		
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Pro	Glu	Arg	Leu	Leu	Phe	Val	Ile	Asp	Ser	Phe	Glu	Glu	Leu	Gln	Gly		
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ggc	ttg	aac	gaa	ccc	gat	tcg	gat	ctg	tgt	ggg	gac	ttg	atg	gag	aaa		831
Gly	Leu	Asn	Glu	Pro	Asp	Ser	Asp	Leu	Cys	Gly	Asp	Leu	Met	Glu	Lys		
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Arg	Pro	Val	Gln	Val	Leu	Leu	Ser	Ser	Leu	Leu	Arg	Lys	Lys	Met	Leu		
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Pro	Glu	Ala	Ser	Leu	Leu	Ile	Ala	Ile	Lys	Pro	Val	Cys	Pro	Lys	Glu		
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Leu	Arg	Asp	Gln	Val	Thr	Ile	Ser	Glu	Ile	Tyr	Gln	Pro	Arg	Gly	Phe		
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aac	gag	agt	gat	agg	tta	gtg	tat	ttc	tgc	tgt	ttc	ttc	aaa	gac	ccg		1023
Asn	Glu	Ser	Asp	Arg	Leu	Val	Tyr	Phe	Cys	Cys	Phe	Phe	Lys	Asp	Pro		
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Lys	Arg	Ala	Met	Glu	Ala	Phe	Asn	Leu	Val	Arg	Glu	Ser	Glu	Gln	Leu		
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Phe	Ser	Ile	Cys	Gln	Ile	Pro	Leu	Leu	Cys	Trp	Ile	Leu	Cys	Thr	Ser		

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agc act acc tct gtg tac tcc tct ttc gtc ttt aac ctg ttc aca cct Ser Thr Thr Ser Val Tyr Ser Ser Phe Val Phe Asn Leu Phe Thr Pro 370 375 380				1215
gag ggt gcc gag ggc ccg act ccg caa acc cag cac cag ctg aag gcc Glu Gly Ala Glu Gly Pro Thr Pro Gln Thr Gln His Gln Leu Lys Ala 385 390 395				1263
ctg tgc tcc ctg gct gca gag ggt atg tgg aca gac aca ttt gag ttt Leu Cys Ser Leu Ala Ala Glu Gly Met Trp Thr Asp Thr Phe Glu Phe 400 405 410				1311
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gaa caa gaa aaa ctg gat gcg ttt ttt ggc ttc caa ctg tcc caa gag Glu Gln Glu Lys Leu Asp Ala Phe Phe Gly Phe Gln Leu Ser Gln Glu 515 520 525				1647
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gaa gct aac ttt cat att att gac aac gtg gac ttg gtg gtt tct gcc	1839
Glu Ala Asn Phe His Ile Ile Asp Asn Val Asp Leu Val Val Ser Ala	
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Phe Val Thr Trp Cys Asn Gln Leu Arg His Pro Ser Cys Arg Leu Gln	
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Lys Leu Gly Ile Asn Asn Val Ser Phe Ser Gly Gln Ser Val Leu Leu	
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Asn Tyr Pro Ala Gly Asn Val Lys Glu Leu Ala Leu Val Asn Cys His	
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Lys Lys Leu Thr Tyr Leu Asn Val Ser Cys Asn Gln Leu Asp Thr Gly	
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Val Pro Leu Leu Cys Glu Ala Leu Cys Ser Pro Asp Thr Val Leu Val	
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Tyr Leu Met Leu Ala Phe Cys His Leu Ser Glu Gln Cys Cys Glu Tyr	
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aaa act gat ttt gat gag gaa acc cag gca ctt ctg acg gct gag gaa Lys Thr Asp Phe Asp Glu Glu Thr Gln Ala Leu Leu Thr Ala Glu Glu 960 965 970	2991
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Glu	Gln	Gln	Ala	Trp	Asn	Ile	Thr	Leu	Arg	Ile	Phe	Gln	Lys	Met	Asp
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Arg	Lys	Asp	Leu	Cys	Met	Lys	Val	Met	Arg	Glu	Arg	Thr	Gly	Tyr	Thr
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Lys	Thr	Tyr	Gln	Ala	His	Ala	Lys	Gln	Lys	Phe	Ser	Arg	Leu	Trp	Ser
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Ser	Lys	Ser	Val	Thr	Glu	Ile	His	Leu	Tyr	Phe	Glu	Glu	Glu	Val	Lys
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Gln	Glu	Glu	Cys	Asp	His	Leu	Asp	Arg	Leu	Phe	Ala	Pro	Lys	Glu	Thr
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Gly	Lys	Gln	Pro	Arg	Thr	Val	Ile	Ile	Gln	Gly	Pro	Gln	Gly	Ile	Gly
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Ile	Phe	Arg	Asp	Arg	Phe	Leu	Tyr	Thr	Phe	Tyr	Phe	Cys	Cys	Arg	Glu
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Leu	Arg	Glu	Leu	Pro	Pro	Thr	Ser	Leu	Ala	Asp	Leu	Ile	Ser	Arg	Glu
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Trp	Pro	Asp	Pro	Ala	Ala	Pro	Ile	Thr	Glu	Ile	Val	Ser	Gln	Pro	Glu
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Arg	Leu	Leu	Phe	Val	Ile	Asp	Ser	Phe	Glu	Glu	Leu	Gln	Gly	Gly	Leu
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Val	Gln	Val	Leu	Leu	Ser	Ser	Leu	Leu	Arg	Lys	Lys	Met	Leu	Pro	Glu
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Ile	Cys	Gln	Ile	Pro	Leu	Leu	Cys	Trp	Ile	Leu	Cys	Thr	Ser	Leu	Lys
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 Asp Asp Leu Arg Arg Asn Gly Val Val Asp Ala Asp Ile Pro Ala Leu
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 Leu Leu Lys Ser His Leu Asp His Pro His Pro Ala Val Arg Cys Val
 465 470 475 480
 Gln Glu Leu Leu Val Ala Asn Phe Glu Lys Ala Arg Arg Ala His Trp
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 Ile Phe Leu Gly Cys Phe Leu Thr Gly Leu Leu Asn Lys Lys Glu Gln
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 Ile Cys Trp His His Ile Cys Ser Val Leu Thr Thr Ser Gly His Leu
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 Lys Leu Ser Arg Asp Asp Ile Arg Ser Leu Cys Asp Ala Leu Asn Tyr
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 Pro Ala Gly Asn Val Lys Glu Leu Ala Leu Val Asn Cys His Leu Ser
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 Pro Ile Asp Cys Glu Val Leu Ala Gly Leu Leu Thr Asn Asn Lys Lys
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 755 760 765
 Leu Leu Cys Glu Ala Leu Cys Ser Pro Asp Thr Val Leu Val Tyr Leu
 770 775 780
 Met Leu Ala Phe Cys His Leu Ser Glu Gln Cys Cys Glu Tyr Ile Ser
 785 790 795 800
 Glu Met Leu Leu Arg Asn Lys Ser Val Arg Tyr Leu Asp Leu Ser Ala
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 820 825 830
 His Pro Asp Cys Cys Leu Asp Ser Leu Cys Leu Val Lys Cys Phe Ile
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 Thr Ala Ala Gly Cys Glu Asp Leu Ala Ser Ala Leu Ile Ser Asn Gln

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Ile Leu Gly Leu Glu Glu Cys Gly Leu Thr Ser Thr Cys Cys Lys Asp		895
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Thr Leu Asn Thr Leu Asp His Thr Gly Val Val Val Leu Cys Glu Ala		925
	930	935
Leu Arg His Pro Glu Cys Ala Leu Gln Val Leu Gly Leu Arg Lys Thr		940
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Asp Phe Asp Glu Glu Thr Gln Ala Leu Leu Thr Ala Glu Glu Glu Arg		955
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